Special Issue

Study on the Processing, Forming and Properties of Polymer Microcellular Foams

Message from the Guest Editors

Polymer foams and porous materials offer unique properties like lightweight, thermal insulation, and shock absorption, enabling diverse applications in aerospace, energy, and wearable tech. Supercritical fluid-blown foams have gained industrial traction due to their eco-friendly advantages.

With rising performance demands, developing sustainable, high-performance polymer foams is crucial for industrial progress. Emerging applications in sensing, energy harvesting, and EMI shielding are key research focuses.

This Special Issue highlights advancements in:

- The development and optimization of novel preparation techniques;
- Breakthroughs in specialized polymer foam fabrication;
- Strategies for precise cellular structure control;
- Investigations into the relationship between cellular morphology and material properties;
- Innovations in functional applications.

We aim to foster collaboration and innovation in this field.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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